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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ROBINSON, MYLES D	

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/019,853	KOWALSKI ET AL.	
	Examiner	Art Unit	
	Myles D. Robinson	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14 - 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14 - 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 April 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The examiner has considered the references listed in the Information Disclosure Statements (IDS) submitted on 11/7/2001 and 4/23/2002 (see attached PTO-1449).

Response to Amendment

3. Applicant's amendment was received on 4/25/2002, and has been entered and made of record. Currently, **claims 14 – 26** are pending.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference signs mentioned in the description: Figs. 14a, 14b and 14c.

5. Furthermore, The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference 26 (Fig. 14) and references E5, E6, E7 and E8 (Fig. 15). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement

drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: Grammatical error shown on page 15, line 24. It is suggested that "20 sections are..." be revised to read "Twenty ~~20~~ sections are...".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. ***Claims 14 – 16 and 19 – 26*** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rourke *et al.*** (U.S. Patent No. 5,398,289) in view of **Stahl GmbH "Folding Techniques"** and further in view of **Yamada** (U.S. Patent No. 4,672,462).

Referring to **claim 21**, Rourke et al. disclose a printing system, comprising:

at least one computer (see Figs. 2, 5A – 5C, controller 7 comprising system controller 54); and

a printer device connected to said at least one computer (see Fig. 2, printer section 8 connected to controller 7) for implementing steps of:

editing the print data for printing on at least one sheet in a logical page sequence corresponding to at least one signature, said at least one signature forming a section of a printed product (see Fig. 8A, signature 170 and Fig. 9, segment 174 and book 175) and including a plurality of pages (see Fig. 19 and column 6, line 52 – column 7, line 7),

defining at least one parameter of a recording medium on which the print data are printed and that is relevant for a position of a print image on the recording medium folded in signatures (column 7, lines 8 – 28 wherein number of signatures, number of pages, number of pages per signature, type and thickness of sheets),

implementing a position correction (see Fig. 19, shift increment x and extra shift increment x') of the respective print image on the pages before printing dependent on said at least one parameter (column 10, lines 13 – 55), and

computationally simulating folds of said at least one sheet needed for producing said at least one signature (see Fig. 15 wherein print preview displaying signature foldlline of print media, column 9, lines 6 – 8) with assistance of a computer program (column 5, lines 45 – 48, column 6, lines 33 – 44 and column 11, line 6 – column 12, line 2 wherein computer program implements signature jobs) so that the print images of successive pages of the folded signature lie exactly registered above one another (see

Figs. 9 and 13 wherein pages with printed images are folded to lie one on top of the other, column 6, line 52 – column 7, line 7, and column 8, lines 23 – 46) but does not explicitly disclose the folds ensue in two directions perpendicular to one another, and said position correction ensues in the two directions perpendicular to one another.

Stahl GmbH discloses the folds ensue in two directions perpendicular to one another (pages 32 – 48 wherein folds in two directions perpendicular to one another) but does not explicitly disclose said position correction ensues in the two directions perpendicular to one another.

Yamada discloses said position correction ensues in the two directions perpendicular to one another (see Fig. 2 and column 4, lines 12 – 15 wherein margins and gutters b, c and d correct image position perpendicular to margin and gutter a).

Rourke, Stahl GmbH and Yamada are combinable because they are both from the same field of endeavor, being signature printing of plural images. At the time of the invention, it would have been obvious to one of ordinary skill in the art to include both folding a sheet of paper and correcting the position of image data in two directions perpendicular to one another along with a method in editing and producing a signature product. The suggestion/motivation for doing so would have been to increase efficiency and with better results with proper folding techniques, as suggested by Stahl GmbH (page 22, lines 1 – 6), and to compensate the difference in gutter width between pages which are to be inner pages and in which are to be outer pages for the varying numbers of pages in binding magazines or catalogues, as suggested by Yamada (column 2, lines 5 – 23).

Referring to **claim 22**, Rourke et al. disclose the system further comprising at least one post-processing device (see Fig. 3, finisher 120) that at least one of cuts and folds and binds a recording medium printed by said printer device to form a printed product (column 5, lines 8 – 10 and column 6, lines 59 – 63).

Referring to **claim 23**, Rourke et al. disclose the system further wherein binding ensues in binding (column 5, lines 8 – 10 and column 6, lines 59 – 63).

Referring to **claims 14 and 20**, respectively, the rationale provided in the rejection of claims 21 and 22, respectively, are incorporated herein. In addition, the systems of claims 21 and 22, respectively, perform the methods of claims 14 and 20, respectively.

Referring to **claims 24 and 26**, the rationale provided in rejection of claim 14 is incorporated herein. The method of claim 14 is stored as a program of instructions of claims 24 and 25 within memory (see Fig. 2, main memory 56 as disclosed by Rourke et al.) and executed by a series of processors (see Figs. 2, 5A – 5C, controller 7 comprising system controller 54 as disclosed by Rourke et al. and Fig. 3, CPU 1 as disclosed by Yamada).

Referring to **claim 25**, Rourke et al. disclose the product further comprising: at least one of a data carrier (see Figs. 2, 5A – 5C, controller 7 communicates data via memory buses 72 and 74) and a datafile and a computer program module and a command sequence and a signal sequence (column 6, lines 1 – 5).

Referring to **claim 15**, Rourke et al. disclose the method further wherein said step of computationally simulating simulates the folds of the signature for said position correction, and further comprising the step of:

calculating correction values for the print image of a page from an influence of each fold on a print image of at least one page (see Fig. 19 wherein shift increment x and extra shift increment x' is applied to all pages 1 – 16, column 10, lines 13 – 55).

Referring to **claim 16**, Rourke et al. disclose the method further wherein said simulating step simulates the folds page-by-page with ascending or descending page number, and further comprising the step of:

forming pairs of successive page numbers that due to the signatures at least one of come to lie on one another as a result of a fold and between which a fold is provided due to the signature (column 6, line 64 – column 7, line 7 and column 8, lines 23 – 46).

Referring to **claim 19**, Rourke et al. disclose the method further wherein said parameter is a thickness of the recording medium (column 7, lines 26 – 28).

9. ***Claims 17 – 18*** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rourke *et al.*** (U.S. Patent No. 5,398,289) in view of **Stahl GmbH "Folding Techniques"** and further in view of **Yamada** (U.S. Patent No. 4,672,462) and further in view of **Iwasaki** (U.S. Pre-Grant Publication No. 2001/0039554 A1) and further in view of **Ahrens** (U.S. Pre-Grant Publication No. 2002/0018239 A1).

Referring to **claim 17**, Rourke et al., Stahl GmbH and Yamada disclose the method as discussed above but does not explicitly disclose the method further comprising the steps of carrying out a successive check out to see whether a physical

fold of the sheet is possible as a result whereof the pages of a page pair of successive pages are arranged in reading sequence after the sheet is folded to form the signature, and implementing a data-oriented fold when a fold is possible and entering the page pair in a list when a physical fold cannot be implemented.

Iwasaki discloses carrying out a successive check out to see whether a physical fold of the sheet is possible as a result whereof the pages of a page pair of successive pages are arranged in reading sequence after the sheet is folded to form the signature (see Figs. 3, 17 – 20 and 22, paragraphs 0065, 0068), and

implementing a data-oriented fold when a fold is possible (see Figs. 3, 17 – 20 and 22, paragraphs 0065, 0068 wherein a fold is implemented if possible, and 0072 wherein a fold is determined impossible) but does not explicitly disclose entering the page pair in a list when a physical fold cannot be implemented.

Ahrens discloses a method implementing a data-oriented format of presentation data when the operation of formatting the presentation data is possible and entering the data in a list (see Fig. 2, list 237 and Fig. 4, step 440) when an operation of the format of presentation data cannot be implemented (see Fig. 4, steps 420 – 455). The rasterization of text data overlapping non-transparent graphic objects relates to the format of presentation data, and the method of successively determining the presence of text data overlapping any non-transparent graphic objects within a document for printing as disclosed relates to the control of such format of presentation data. Furthermore, the data-oriented folding of page pair relates to the format of presentation data, and the method of successively determining the presence of physical folds of a

page pair within a document for printing relates to the control of such format of presentation data. Therefore, the operation of the format of presentation is analogous to both the normal printing of text objects without converting into a bitmap image as disclosed by Ahrens and to the data-oriented folding of a page pair. Also, the affirmative successive detection of text data overlapping non-transparent graphic objects (see Fig. 4, step 430, paragraph 0027 – 0034 wherein a successive check is done for all non-transparent graphic objects to determine if text overlaps those graphic objects) is analogous to the affirmative successive detection of an impossible physical fold. An operation of formatting the presentation data, i.e. normal printing of text objects without converting into a bitmap image, is implemented when possible (see Fig. 4, steps 431 and 432, paragraphs 0029 – 0030, paragraph 0039, lines 14 – 15 and paragraph 0044, lines 4 – 6 wherein non-overlapping text data is processed for printing as non-bitmap data). The data is entered into list 237 when an operation of the format of presentation data, i.e. normal printing of text objects without converting into a bitmap image, cannot be implemented (see Fig. 4, steps 431, 432 and 440, paragraphs 0029 – 0030, 0040).

Rourke, Stahl GmbH, Yamada, Iwasaki and Ahrens are combinable because they are both from the same field of endeavor, being detail of image placement wherein the format of the presentation data is controlled. At the time of the invention, it would have been obvious to one of ordinary skill in the art to include successively checking if a physical fold is possible and implementing the physical fold if possible along with a printing system wherein the format of the presentation data is controlled. The

suggestion/motivation for doing so would have been to improve the convenience of paginating printed material which automates the assignment of fold lines of printed material, as suggested by Iwasaki (paragraphs 0004, 0005, 0009 – 0011), and because Ahrens is from the same field of endeavor, being detail of image placement wherein the format of the presentation data is controlled.

Referring to **claim 18**, Ahrens discloses the method further comprising the step of processing presentation data present in the list (see Fig. 2, list 237 and Fig. 4, steps 450 and 455) with priority over other presentation data until a non-processed presentation data in the list is processed (paragraph 0037, paragraph 0039, lines 14 – 15, paragraphs 0040 and 0043). The rasterization of text data overlapping non-transparent graphic objects present in the list relates to the format of presentation data, and the method of rastering text data overlapping any non-transparent graphic objects in the list for printing as disclosed relates to the control of such format of presentation data. Furthermore, the non-foldable page pair present in the list relates to the format of presentation data, and the method of processing page pairs in the list for printing relates to the control of such format of presentation data. Therefore, the processing presentation data present in the list is analogous to both the rasterization of text data overlapping non-transparent graphic objects present in the list as disclosed by Ahrens and the processing of the non-foldable page pair present in the list. Also, the rastering of text data overlapping any non-transparent graphic objects in the list (see Fig. 4, step 450 and paragraph 0037) is analogous to the processing of processing the non-foldable page pairs in the list. Processing of presentation data present in the list, i.e.

rasterization of text data overlapping non-transparent graphic object in the list 237, is performed before the final output image is printed as well as before the printing of non-bitmap data (see Fig. 4 wherein the rasterization steps 450 and 455 are performed prior to step 460 wherein both bitmap and non-bitmap data is printed, paragraphs 0026, 0037, paragraph 0039, lines 14 – 15, paragraph 0043 and paragraph 0044, lines 4 – 6 wherein non-overlapping text data is processed for printing as non-bitmap data); thus, processing of presentation data present in the list, i.e. processing of page pairs present in the list, is performed with priority over other presentation data, i.e. other page pairs. Regarding "until a non-foldable page pair in the list is processed", only non-foldable page pairs exist in the list according to claim 17, and Ahrens discloses processing of presentation data present in the list, i.e. rasterization of text data overlapping non-transparent graphic object in list 237, which is analogous to processing page pairs present in the list which only contains non-foldable page pairs.

Allowable Subject Matter

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sato *et al.* (U.S. Patent No. 5,774,363) disclose a page arrangement order determination method wherein the order is determined based on only the order of folding of printed paper and a position of a front page.

Forest *et al.* (U.S. Patent No. 5,105,283) disclose a production of signatures from documents stored in electronic memory which includes position correction of image data.

Ryan *et al.* (U.S. Pre-Grant Publication No. 2002/0016803 A1) disclose a graphic user interface for managing assembler/finisher systems which includes print previewing of signature jobs.

Dechamps (U.S. Pre-Grant Publication No. 2004/0218217 A1) discloses a method for automatically determining an imposition plan wherein the optimal folding order is based upon the direction of the paper grain.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Myles D. Robinson whose telephone number is (571) 272-5944. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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